

Remarks

Reconsideration of this Application is respectfully requested.

Claims 1-24 are pending in the application, with claims 1, 8, 13, and 20 being the independent claims. Claims 1-24 are sought to be amended. These changes are believed to introduce no new matter, and their entry is respectfully requested.

Based on the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding rejections and that they be withdrawn.

Rejections under 35 U.S.C. § 102

In paragraph 4 of the Office Action, claims 1-24 were rejected under 35 U.S.C. § 102(a) as being anticipated by U.S. Patent No. 6,032,197 to Birdwell *et al.* (hereinafter Birdwell). Applicants respectfully traverse this rejection.

Claims 1-7 and 13-19

Independent claim 1, as amended, recites:

A method for optimizing the transmission of TCP/IP traffic between a cable modem and a cable modem termination system (CMTS) in a DOCSIS network, comprising the steps of:

- (a) *determining whether the CMTS supports a dynamic delta encoding header suppression protocol; and*
- (b) *if the CMTS does support the dynamic delta encoding header suppression protocol, then:*
 - (i) *transmitting fields in a first protocol header of a first TCP protocol packet from the cable modem,*
 - (ii) *suppressing a redundant field in a second protocol header of a subsequent TCP protocol packet, and*
 - (iii) *transmitting a delta-encoded value for each non-redundant field in said second protocol header of said subsequent TCP protocol packet, wherein said delta-encoded value represents a change in value from a respective non-redundant field in said first protocol header of said first TCP protocol packet.*

(See claim 1, emphasis added)

Birdwell nowhere teaches or suggests *determining whether the CMTS supports a dynamic delta encoding header suppression protocol*, as set forth in Applicants' claim 1, as amended. Because Birdwell teaches a header compression technique for a uni-directional broadcast network, it can only support a single type of header suppression technique that is already supported by both the server and the clients. In contrast, in amended claim 1, the cable modem first *determines whether the CMTS supports a dynamic delta encoding header suppression protocol* before the cable modem performs the dynamic delta encoding header suppression technique. Birdwell does not even suggest *determining whether the CMTS supports a dynamic delta encoding header suppression protocol*, as set forth in Applicants' claim 1, as amended.

Independent claim 13, as amended, recites:

A computer program product comprising a computer useable medium including control logic stored therein, said control logic for optimizing the transmission of TCP/IP traffic between a cable modem and a cable modem termination system (CMTS) in a DOCSIS network, said control logic comprising:

first means for enabling a processor to determine whether the CMTS supports a dynamic delta encoding header suppression protocol; and
second means for enabling a processor, if the CMTS does support the dynamic delta encoding header suppression protocol, to
transmit fields in a first protocol header of a first TCP protocol packet,

suppress a redundant field in a second protocol header of a subsequent TCP protocol packet, and

transmit a delta-encoded value for each non-redundant field in said second protocol header of said subsequent TCP protocol packet, wherein said delta-encoded value represents a change in value from a respective non-redundant field in said first protocol header of said first TCP protocol packet.

(See claim 13, emphasis added)

Birdwell teaches a header compression technique for a uni-directional broadcast network, which can only support a single type of header suppression technique that is already supported by both the server and the clients. Birdwell does not even suggest *first*

means for enabling a processor to determine whether the CMTS supports a dynamic delta encoding header suppression protocol, as set forth in Applicants' claim 13, as amended.

Claims 2-7, which depend from independent claim 1, also distinguish over Birdwell for the reasons set forth above with respect to independent claim 1, and further in view of their own respective features. Claims 14-19, which depend from independent claim 13, also distinguish over Birdwell for the reasons set forth above with respect to independent claim 13, and further in view of their own respective features.

Claim 8-12 and 20-24

Independent claim 8, as amended, recites:

A method for receiving packets by a cable modem termination system (CMTS) from a cable modem in a DOCSIS network, comprising the steps of:

- (a) *receiving a message from the cable modem indicating support for a dynamic delta encoding header suppression protocol*; and
- (b) if the CMTS supports the dynamic delta encoding header suppression protocol, then:
 - (i) receiving fields in a first protocol header of a first TCP protocol packet from the cable modem,
 - (ii) receiving an indication that a redundant field in a second protocol header of a subsequent TCP protocol packet is suppressed, and
 - (iii) receiving a delta-encoded value for each non-redundant field in said second protocol header of said subsequent TCP protocol packet, wherein said delta-encoded value represents a change in value from a respective non-redundant field in said first protocol header of said first TCP protocol packet.

(See claim 8, emphasis added)

Because Birdwell teaches a header compression technique for a uni-directional broadcast network, it can only support a single type of header suppression technique that is already supported by both the server and the clients. Accordingly, Birdwell nowhere teaches or suggests *receiving a message from the cable modem indicating support for a dynamic delta encoding header suppression protocol*.

dynamic delta encoding header suppression protocol, as set forth in Applicants' claim 8, as amended.

Independent claim 20, as amended, recites:

A computer program product comprising a computer useable medium including control logic stored therein, said control logic for enabling packets to be received by a cable modem termination system (CMTS) from a cable modem in a DOCSIS network, said control logic comprising:

first means for enabling a processor to receive a message from the cable modem indicating support for a dynamic delta encoding header suppression protocol; and

second means for enabling a processor, if the CMTS supports the dynamic delta encoding header suppression protocol, to

receive fields in a first protocol header of a first TCP protocol packet from the cable modem,

receive an indication that a redundant field in a second protocol header of a subsequent TCP protocol packet is suppressed, and

receive a delta-encoded value for each non-redundant field in said second protocol header of said subsequent TCP protocol packet, wherein said delta-encoded value represents a change in value from a respective non-redundant field in said first protocol header of said first TCP protocol packet.

(*See claim 20, emphasis added*)

Because Birdwell teaches a header compression technique for a uni-directional broadcast network, it can only support a single type of header suppression technique that is already supported by both the server and the clients. Accordingly, Birdwell nowhere teaches or suggests *first means for enabling a processor to receive a message from the cable modem indicating support for a dynamic delta encoding header suppression protocol*, as set forth in Applicants' claim 20, as amended.

Claims 9-12, which depend from independent claim 8, also distinguish over Birdwell for the reasons set forth above with respect to independent claim 8, and further in view of their own respective features. Claims 21-24, which depend from independent

claim 20, also distinguish over Birdwell for the reasons set forth above with respect to independent claim 20, and further in view of their own respective features.

Therefore, for at least the reasons set forth above, reconsideration and withdrawal of the rejection of claims 1-24 is respectfully requested.

Conclusion

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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